

CLAIM AMENDMENTS

Please cancel claims 22, 28, and 30 without prejudice or disclaimer.

Please amend claims 1, 11, 14, 18, 21, and 27 as follows.

1. (Currently Amended) A method, comprising:
periodically capturing data from a tunable optical device during operation of the tunable optical device, the data being associated with at least one operational parameter of the tunable optical device; and
streaming the data from the tunable optical device using a serial interface that is coupled to a select pin, a data clock pin, and a data pin of a controller coupled to the tunable optical device.
2. (Original) The method of claim 1 wherein streaming the data comprises outputting a plurality of data frames from a serial interface coupled to the tunable optical device, wherein each data frame of the plurality of data frames includes data captured from the tunable optical device at a particular time.
3. (Original) The method of claim 2, further comprising formatting the data into the plurality of data frames.
4. (Original) The method of claim 2 wherein each data frame includes a frame start code, an index number, a standard data section, and a device specific data section.
5. (Original) The method of claim 4 wherein each data frame includes a checksum.
6. (Original) The method of claim 1, further comprising buffering the captured data at the tunable optical device prior to streaming the data from the tunable optical device.

7. (Original) The method of claim 1, further comprising receiving a user injected signal at the tunable optical device to artificially change an operating factor of the tunable optical device.
8. (Original) The method of claim 7, further comprising routing the user injected signal to a controller of the tunable optical device.
9. (Original) The method of claim 1, further comprising receiving the data at a data acquisition unit communicatively coupled to the tunable device.
10. (Original) The method of claim 9, further comprising storing the data at a storage device communicatively coupled to the data acquisition unit.
11. (Currently Amended) An apparatus, comprising:
a tunable optical device; and
a controller coupled to the tunable optical device, the controller including a serial interface coupled to a processor, the controller to capture a plurality of sets of real-time data from the tunable optical device during operation of the tunable optical device, the plurality of sets of real-time data being associated with at least one operational parameter of the tunable optical device, the controller to stream the plurality of sets of real-time data from the tunable optical device, wherein the serial interface is coupled to a select pin, a data clock pin, and a data pin of the controller.
12. (Original) The apparatus of claim 11 wherein each set of the plurality of sets real-time data includes a plurality of data points regarding the tunable optical device captured at a unique time.
13. (Original) The apparatus of claim 11 wherein the serial interface comprises one of an SPI (Serial Peripheral Interface), a UART (Universal Asynchronous Receiver/Transmitter), an I2C (Inter-Integrated Circuit), a USB (Universal Serial Bus) port, or a SCSI (Small Computer System Interface).

14. (Currently Amended) The apparatus of claim 11 wherein ~~the serial interface is coupled to a select pin, a data clock pin, and a data pin of the controller~~, the select pin is configured to signal a device communicatively coupled to the serial interface to prepare to receive the plurality of sets of real-time data, the data clock pin is configured to indicate the data rate that the plurality of sets of real-time data are to be outputted from the serial interface, and the data pin is configured to output the plurality of sets of real-time data from the tunable optical device.

15. (Original) The apparatus of claim 11, further comprising a buffer coupled to the controller to temporarily store at least a portion of the plurality of sets of real-time data.

16. (Original) The apparatus of claim 11, further comprising an analog-to-digital (ADC) coupled to the controller to convert at least a portion of the plurality of sets of real-time data from analog to digital.

17. (Original) The apparatus of claim 11 wherein the plurality of sets of real-time data are captured at a periodic rate based on a processing speed of the processor.

18. (Currently Amended) A system, comprising:

a tunable optical device; and

a controller coupled to the tunable optical device, the controller comprising:

a processor; and

at least one flash device coupled to the processor, the at least one flash device including firmware instructions which when executed by the processor perform operations comprising:

capturing a first plurality of data points from the tunable optical device at a first time, the data points being associated with at least one operational parameter of the tunable optical device; and

streaming the first plurality of data points from the tunable optical device using a serial interface that is coupled to a select pin, a data clock pin, and a data pin of a controller coupled to the tunable optical device.

19. (Original) The system of claim 18 wherein execution of the firmware instructions further perform operations comprising forming the first plurality of data points into a first data frame.

20. (Original) The system of claim 19 wherein execution of the firmware instructions further perform operations comprising:

capturing a second plurality of data points from the tunable optical device at a second time;

forming the second plurality of data points into a second data frame; and

streaming the second plurality of data points from the tunable optical device.

21. (Currently Amended) A method, comprising:

receiving a select signal at a data acquisition unit from a select pin of a serial interface of a controller coupled to a tunable optical device, the select signal to indicate to the data acquisition unit to prepare to receive a data stream from the tunable optical device;

receiving ~~[[a]]~~ the data stream from ~~[[a]]~~ the tunable optical device at ~~[[a]]~~ the data acquisition unit, wherein the data stream includes data periodically captured from the tunable optical device, the data being associated with at least one operational parameter of the tunable optical device; and

storing the data in a storage device communicatively coupled to the data acquisition unit.

22. (Canceled).

23. (Original) The method of claim 21 wherein receiving the data stream comprises receiving a plurality of data frames at a serial interface coupled to the data acquisition unit, wherein each data frame of the plurality of data frames includes a plurality of data points captured from the tunable optical device at a particular time.

24. (Original) The method of claim 23 wherein each data frame of the plurality of data frames includes a frame start code, an index number, a standard data section, and a device specific data section.

25. (Original) The method of claim 24, further comprising synchronizing the receiving of the plurality of data frames through the index number of at least one data frame of the plurality of data frames.

26. (Original) The method of claim 21, further comprising sending a user injected signal from the data acquisition unit to the tunable optical device, wherein the user injected signal to artificially change an operating factor of the tunable optical device.

27. (Currently Amended) An article of manufacture comprising:

a machine-readable medium including a plurality of instructions which when executed by a controller perform operations comprising:

capturing real-time data from a tunable optical device during operation of the tunable optical device, the data being associated with at least one operational parameter of the tunable optical device;

forming a plurality of data frames from the real-time data, each data frame of the plurality of data frames including at least one data point captured from the tunable optical device at a particular time; and

streaming the plurality of data frames from the tunable optical device by sending a select signal to a select line of the serial interface that is coupled to the tunable optical device to signal a device communicatively coupled to the tunable optical device to prepare to receive streaming of a plurality of data frames and sending the plurality of data frames from a serial interface coupled to the tunable optical device.

28. (Canceled).

29. (Original) The article of manufacture of claim 28 wherein execution of the plurality of instructions further perform operations comprising taking the at least one data point from a buffer coupled to the serial interface to form a data frame of the plurality of data frames.

30. (Canceled).